

SWBAT

apply newton's second
law to problems with
friction

Sep 4-7:31 AM

Welcome!!!

SECA CP Physics
Friday 11 March 2016H. Leslie Grebe
Room C-244Centering
(circle)

- Show me SchoolView if you want phone in class...
- VECTOR ADDITION due!!!

\$2?

NEW HOMEWORK: Pg 73 **DUE MONDAY**
& worksheet
<http://www.flippingphysics.com/second-law.html>

Opening Activity - Quick Write:

If the car's engine applies a force of 300 N east and there is friction of 100 N west, what is the net force?

$$\begin{array}{c} 100\text{N W} \quad 300\text{N E} \\ \leftarrow \quad \rightarrow \end{array} \Rightarrow 200\text{N EAST} \quad \text{VECTOR}$$

If the car has a mass of 500 kg, what is its acceleration?

$$m \cdot a = F \quad a$$

$$\frac{500\text{kg} \cdot a = 200\text{N EAST}}{500\text{kg}} = 0.4\text{ m/s}^2 \text{ EAST}$$

Circle: Learning to ride a bike? WDWDW?
WCWDB?

Sep 7-7:04 AM

What we should have solid:

Memorize our ⁸ vocab cards, units, vector or not, definition, formula

Be able to answer distance vs displacement questions

Be able to make measurements of real-life motion. Know what is likely to make timing things difficult and how to get more reliable timing results

Be able to convert between miles and meters, between hours, minutes, and seconds

Be able to calculate speed = dist/time and velocity = disp/time

Know what all of the symbols in the UAM equations stand for and mean

Be able to turn a UAM word problem into a list of knowns and unknowns

Be able to pick the equation with those 4 things in it

Be able to put the knowns into that equation

(Be able to solve for the unknown)

→ PROJECTILES: v_x IS CONSTANT; $a_y = -9.81 \text{ m/s}^2$ ^{v_y CHANGES} PG 42

PG 43 TIME, Δt , CONNECTS x & y

PG 49 VECTORS INTO x & y , ADD VECTORS
SOH-CAH-TOA

PG 59 DIFFERENCE BETWEEN MASS & WEIGHT

PG 61 NET FORCE

PG 63 FREE BODY DIAGRAMS

PG 70 $F_f = \mu \cdot N$

$$F = m \cdot a$$

QW every day to review - gather responses to front board.

Dec 4-9:15 AM

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Sep 5-9:09 AM

Pg 73?

Youtube: "AP Physics 1: Forces 12: Static & Kinetic Friction"

(from 7:30 to the end)

→ FOUND F_{FRIC} STATIC $\mu_s \cdot N$

→ FOUND F_{FRIC} KINETIC $\mu \cdot N$



BALANCED:

$$W = N$$

$$W = m \cdot g = N$$

$\sum \Rightarrow \text{SUM}$
SIGMA

$$F_{\text{NET}} \text{ SIDEWAYS} = m \cdot a$$

Mar 11-8:27 AM